REMARKS

This Amendment is in response to the Office Action dated April 21, 1999, wherein the Examiner objected to the Information Disclosure Statement filed March 25, 1998. Applicants are attempting to arrange for the deposit of a set of references in the U.S. Patent and Trademark Office, when and if approved by the U.S. Patent and Trademark Office, will be deemed to meet deposit requirements.

The Examiner objected to certain claims for technical reasons set forth in the Detailed Action. The claims as amended herein are believed to address each of the Examiner's concerns, except that in claim 45-47, it is believed that the functional language further limits the claims. In claim 41, the plurality of layers are integrally joined together and thus void free in accordance with the feature of the present invention.

The Examiner rejected claims 37, 41 and 42 as allegedly anticipated by Nikitin. The Examiner rejected claims 1-32 and 34 over Titus' 410 in view of Elton '565. The Examiner also rejected claims 38, 39 and 44-49 as allegedly unpatentable over Nikitin '244 in view of Elton '565.

The Examiner's rejection of the claims is respectfully traversed for the reasons set forth below.

Nikitin does not disclose a high voltage cable, but merely includes so called high voltage elements which are apparently short sections of a solid conductor accommodated in insulation sleeves having hollow projections which receive or accommodate a thermosetting material. It is unclear how the Nikitin device is manufactured or what components make up the various parts. The reference simply describes half windings located in insulation sleeves within a slotted stator. It is not clearly described how the elements are constructed or of what components and it does not suggest or describe the cable in accordance with the present invention.

Nikitin does not show or suggest a cable having a plurality of insulated strands and at least one uninsulated strand in contact with an insulating covering. In high voltage electric machines, high end eddy currents are induced in the conductors. In accordance with at least one feature of the invention, these eddy currents are minimized by insulating the individual strands in the cable. The uninsulated strand is in electrical contact with the insulating covering to equalize the potential. Conventional high voltage cables, including Elton do not

employ such arrangements. Likewise, Nikitin does not show or suggest as such arrangements.

With respect to the Examiner's objection of claims 1-32 and 34 over Titus in view of Elton, Titus simply discloses a gas turbine electrical power generation system. The system is directed particularly to a DC system. Elton discloses a conventional winding for a motor or generator having semiconducting pyrolyzed glass fiber layer. However, the combination of Titus with Elton does not disclose claimed high voltage system of the invention.

The present invention employs a cable structure in the winding of a electric machine to produce a high voltage machine. Elton simply employs a conventional winding with a semiconducting pyrolyzed glass layer in a machine. The disclosure in Elton shows an alternative embodiment wherein the semiconducting layer may be employed in a cable. However, Elton does not show or suggest that such a cable would be useful in an electric machine. Likewise, Elton shows that it is possible to use the semiconducting material as part of a shield for electronic equipment. There is no suggestion however, that the cable structure could be used in an electric machine. Also, Elton does not show a plurality of insulated strands and at least one insulated strand in contact with the covering.

The Examiner's attention is respectfully directed to Breitenbach et al, U.S. Patent No. 4,785,138 which has been cited in other related applications. Breitenbach discloses an electric cable used as a phase winding of a linear motor.

Breitenbach does not disclose or suggest that such a winding would be useful in a rotating machine. Further, the arrangement in Breitenbach would not operate in the apparatus of the invention because the strands are not insulated. In this connection, if the cable in Breitenbach is used in a rotating machine, that is where the magnetic field operates on the entire length of the cable at all times, the high induced eddy currents would likely cause cable failure. The Breitenbach device is designed for high current and low voltage which is opposite to the disclosure of the invention. Indeed, the cable described in Breitenbach is essentially used as a electric transmission device and only a small portion of the cable, at any point in time, is utilized as the linear motor winding. It is also clear from the disclosure of Breitenbach, see for example column 5, lines 7-18, that the system is not designed for high voltage or adapted for high current. Further, Breitenbach does not eliminate or reduce the possibility of corona discharge in as much as the outer portion of the cable is designed to carry high current to avoid scorch points as noted.

In view of the foregoing, it is respectfully requested that the Examiner reconsider his rejection of the claims, the allowance of which is earnestly solicited.

Respectfully submitted,

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